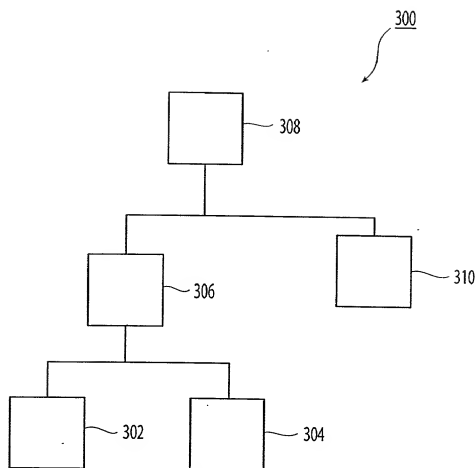


Fig. 2



*Fig. 3*

PROCESS MODELS (ORGSIM)

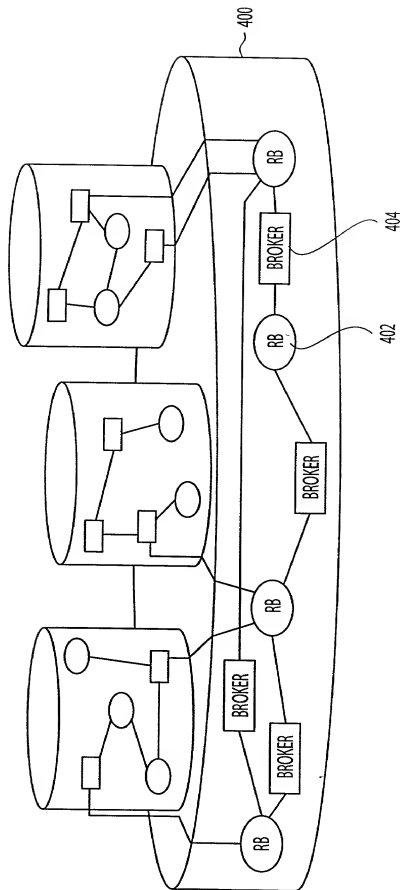


Fig. 4a

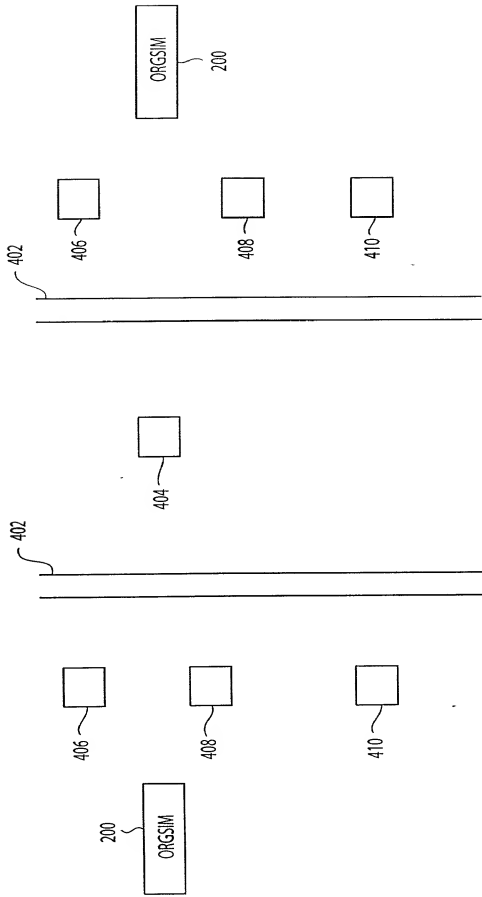
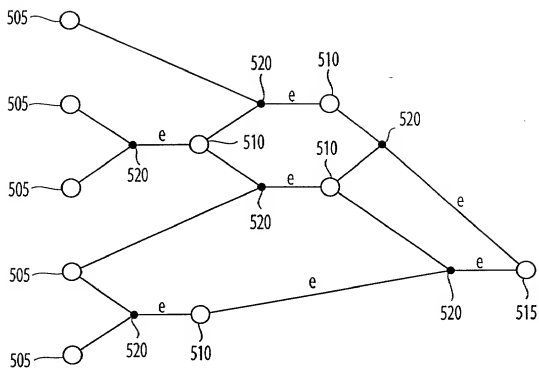


Fig. 4b

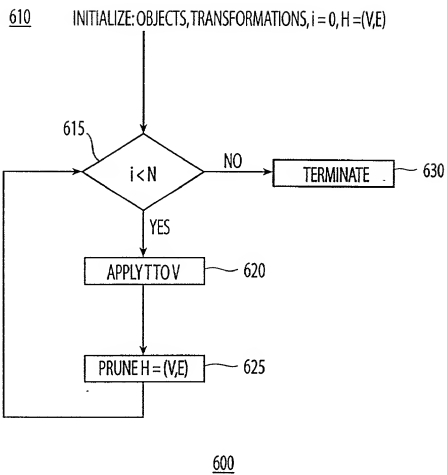
## RESOURCE BUS (6): PROPAGATION

- C1 REQUESTS {B C D} 450
- P1 OFFERS {A B C D E} 452
- C1 ACCEPTS {A B C D E} 454
- {IF E NOT REQUESTED, EVENTUALLY LOST} 456
- C1 AS P2 OFFERS {A B C D} 458
- C2 REQUESTS {A B C...} ETC... 460

*Fig. 4c*

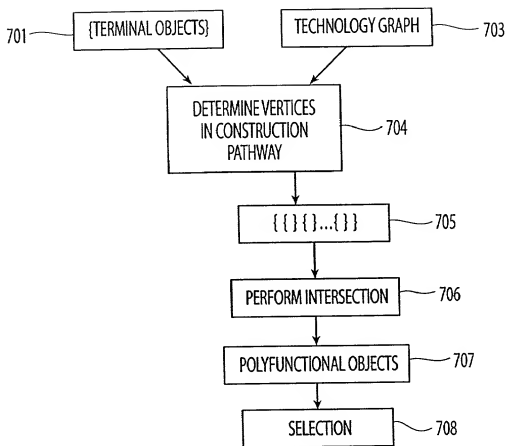


*Fig. 5*



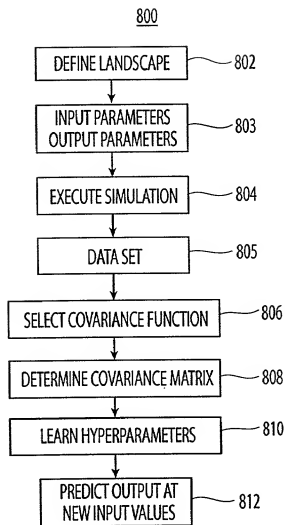
*Fig. 6*



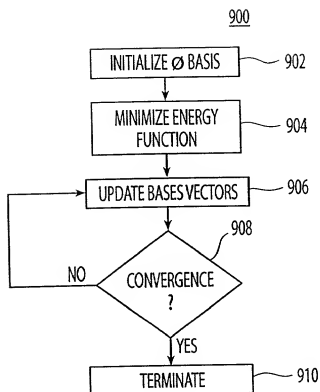


700

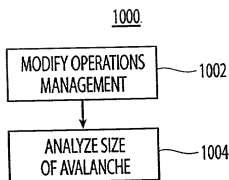
*Fig. 7*



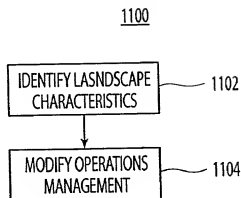
*Fig. 8*



*Fig. 9*

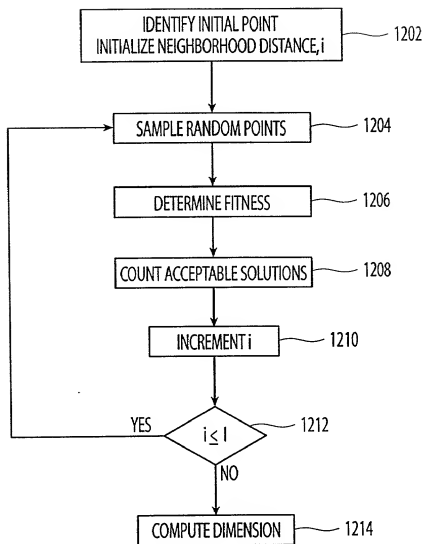


*Fig. 10*



*Fig. 11*

1200



*Fig. 12a*

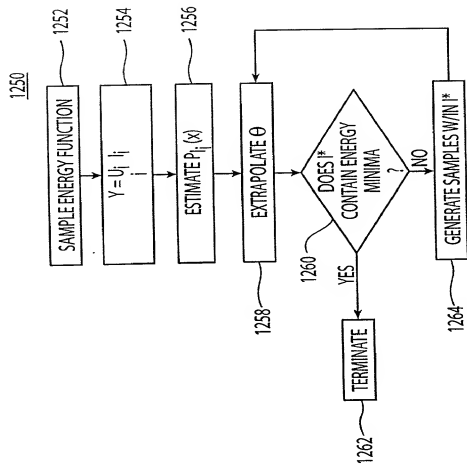


Fig. 12b

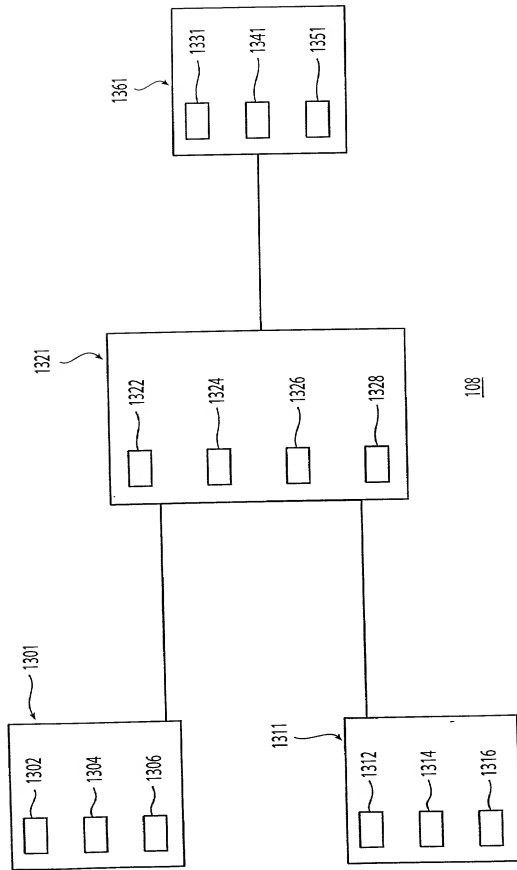
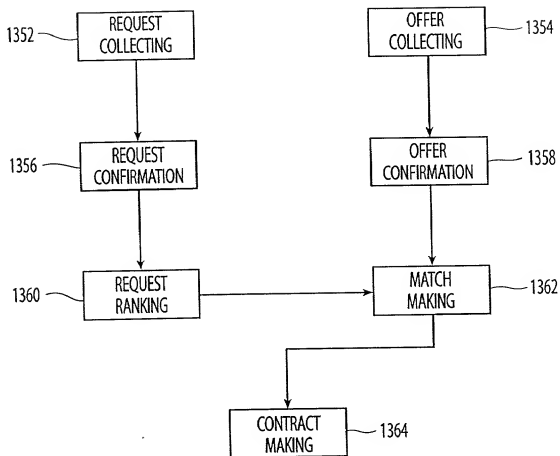
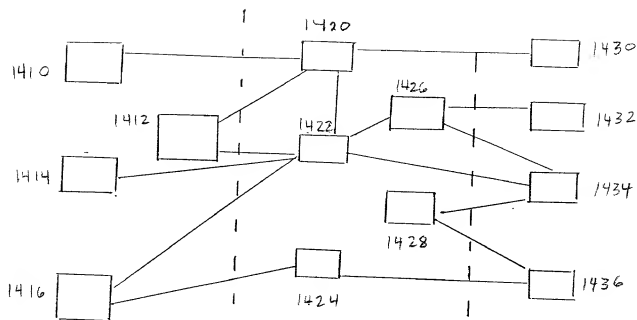


Fig. 13a

1350



*Fig. 13b*



F16. 14

09763441 002004





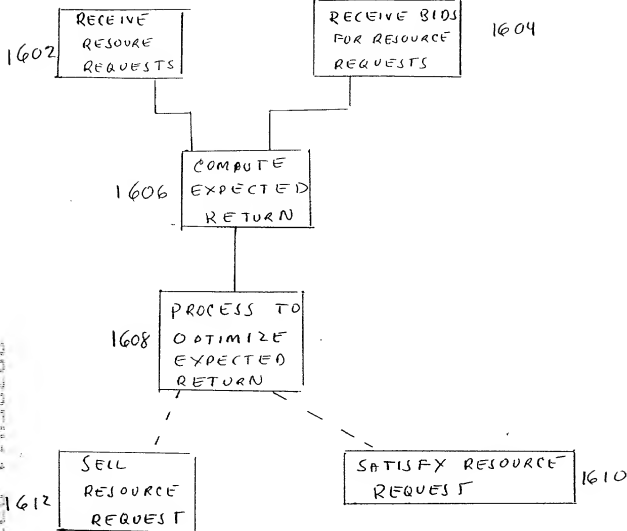
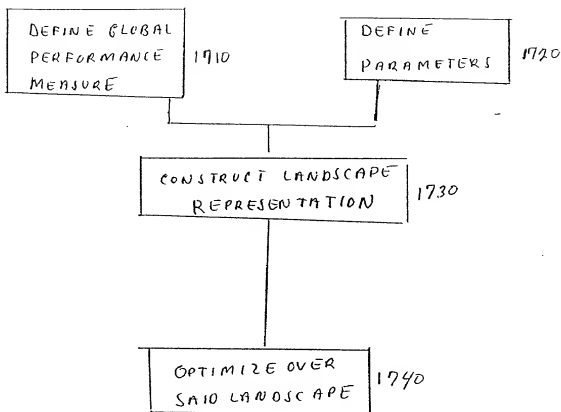


FIG. 16



1700

FIG. 17

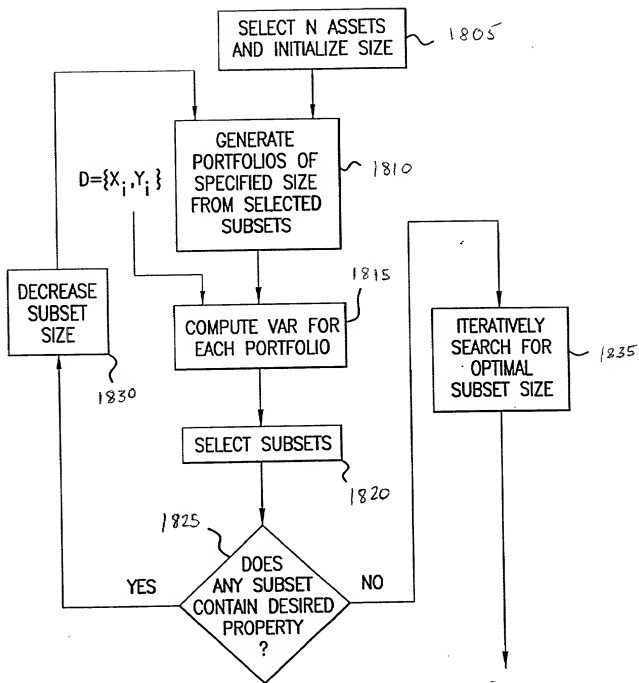


FIG. 18

100220-1-1452460

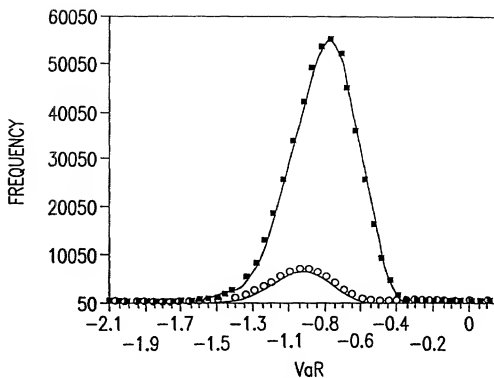


FIG. 19

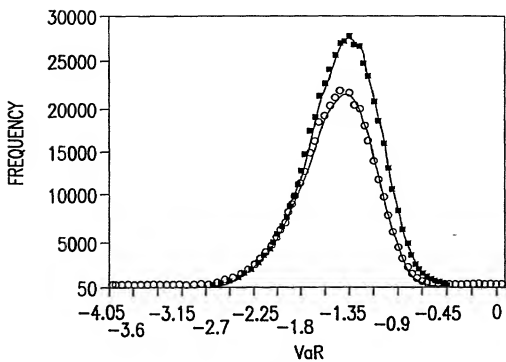


FIG. 20

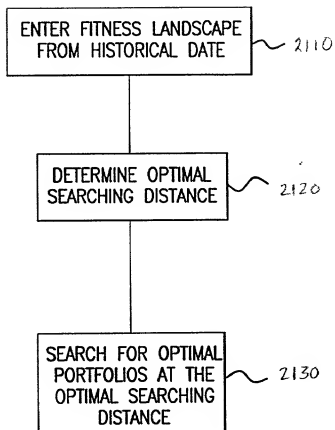


FIG. 21

$$\begin{aligned}
 & \{1, 1, \{2, -1.\}\} \\
 & \{1, 2, \{1, -1.\}\} \\
 & \{1, 3, \{5, -0.629195\}\} \\
 & \{1, 4, \{5, -0.749052\}\} \\
 & \{3, 5, \{3, -0.629195\}, \{4, -0.749052\}, \{24, -0.350841\}\} \\
 & \{1, 6, \{8, -0.3866\}\} \\
 & \{2, 7, \{8, -0.434322\}, \{9, -0.514114\}\} \\
 & \{3, 8, \{6, -0.3866\}, \{7, -0.434322\}, \{9, -0.332176\}\} \\
 & \{2, 9, \{7, -0.514114\}, \{8, -0.332176\}\} \\
 & \{2, 10, \{11, -1.\}, \{17, -0.333359\}\} \\
 & \{2, 11, \{10, -1.\}, \{15, -0.311709\}\} \\
 & \{1, 12, \{14, -0.889441\}\} \\
 & \{1, 13, \{14, -0.411215\}\} \\
 & \{2, 14, \{12, -0.889441\}, \{13, -0.411215\}\} \\
 & \{3, 15, \{11, -0.311709\}, \{17, -0.593436\}, \{18, -0.602979\}\} \\
 & \{2, 16, \{17, -0.503126\}, \{18, -0.52658\}\} \\
 & \{3, 17, \{10, -0.333359\}, \{15, -0.593436\}, \{16, -0.503126\}\} \\
 & \{2, 18, \{15, -0.60979\}, \{16, -0.52658\}\} \\
 & \{1, 19, \{20, -1.\}\} \\
 & \{1, 20, \{19, -1.\}\} \\
 & \{1, 21, \{23, -0.770342\}\} \\
 & \{1, 22, \{23, -0.696416\}\} \\
 & \{2, 23, \{21, -0.770342\}, \{22, -0.696416\}\} \\
 & \{1, 24, \{5, -0.350841\}\} \\
 & \{2, 25, \{26, -0.491271\}, \{27, -0.459285\}\} \\
 & \{2, 26, \{25, -0.491271\}, \{27, -0.49478\}\} \\
 & \{2, 27, \{25, -0.459285\}, \{26, -0.49478\}\} \\
 & \{1, 28, \{29, -1.\}\} \\
 & \{1, 29, \{28, -1.\}\} \\
 & \{1, 30, \{32, -0.794733\}\} \\
 & \{1, 31, \{32, -0.53383\}\} \\
 & \{2, 32, \{30, -0.794733\}, \{31, -0.53383\}\}
 \end{aligned}$$

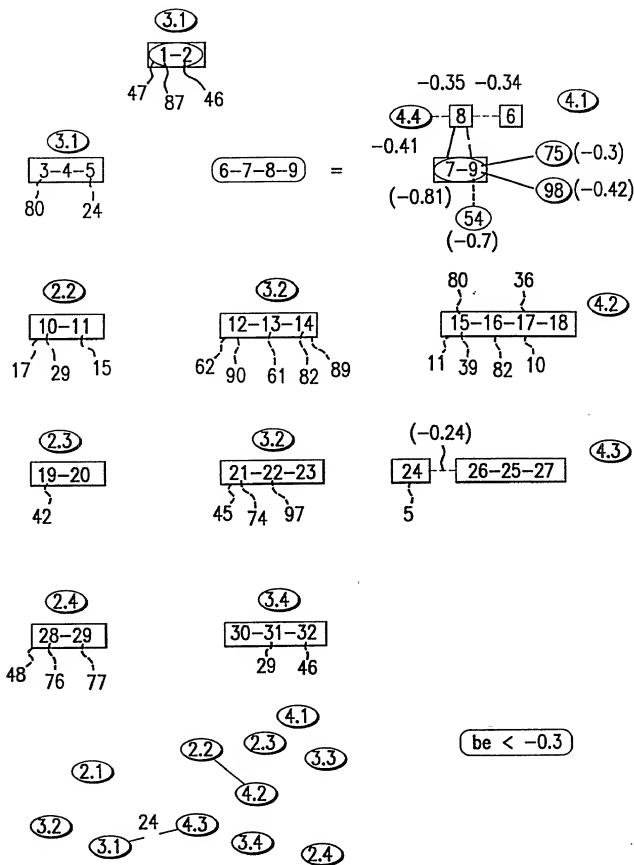
FIG. 22

$$\begin{aligned}
& \{3., 1\}, \{2., -1\}, \{47., -0.31\}, \{87., -0.3\} \\
& \{2., 2., \{1., -1\}, \{46., -0.31\}\} \\
& \{2., 3., \{5., -0.63\}, \{80., -0.34\}\} \\
& \{1., 4., \{5., -0.75\}\} \\
& \{3., 5., \{3., -0.63\}, \{4., -0.75\}, \{24., -0.35\}\} \\
& \{1., 6., \{8., -0.39\}\} \\
& \{2., 7., \{8., -0.43\}, \{9., -0.51\}\} \\
& \{4., 8., \{6., -0.39\}, \{7., -0.43\}, \{9., -0.33\}, \{44., -0.35\}\} \\
& \{5., 9., \{7., -0.51\}, \{8., -0.33\}, \{54., -0.3\}, \{75., -0.3\}, \{98., -42\}\} \\
& \{3., 10., \{11., -1\}, \{17., -0.33\}, \{39., -0.36\}\} \\
& \{2., 11., \{10., -1\}, \{15., -0.31\}\} \\
& \{3., 12., \{14., -0.89\}, \{62., -0.35\}, \{90., -0.3\}\} \\
& \{2., 13., \{14., -0.41\}, \{61., -0.31\}\} \\
& \{4., 14., \{12., -0.89\}, \{13., -0.41\}, \{82., -0.32\}, \{89., -0.35\}\} \\
& \{5., 15., \{11., -0.31\}, \{17., -0.59\}, \{18., -0.6\}, \{39., -0.31\}, \{80., -0.31\}\} \\
& \{3., 16., \{17., -0.5\}, \{18., -0.53\}, \{82., -0.32\}\} \\
& \{4., 17., \{10., -0.33\}, \{15., -0.59\}, \{16., -0.5\}, \{36., -0.38\}\} \\
& \{2., 18., \{15., -0.6\}, \{16., -0.53\}\} \\
& \{2., 19., \{20., -1\}, \{42., -0.3\}\} \\
& \{1., 20., \{19., -1\}\} \\
& \{3., 21., \{23., -0.77\}, \{45., -0.32\}, \{94., -0.3\}\} \\
& \{2., 22., \{23., -0.7\}, \{97., -0.32\}\} \\
& \{2., 23., \{21., -0.77\}, \{22., -0.7\}\} \\
& \{1., 24., \{5., -0.35\}\} \\
& \{2., 25., \{26., -0.49\}, \{27., -0.46\}\} \\
& \{2., 26., \{25., -0.49\}, \{27., -0.49\}\} \\
& \{2., 27., \{25., -0.46\}, \{26., -0.49\}\} \\
& \{3., 28., \{29., -1\}, \{48., -0.31\}, \{76., -0.31\}\} \\
& \{2., 29., \{28., -1\}, \{77., -0.3\}\} \\
& \{1., 30., \{32., -0.79\}\} \\
& \{2., 31., \{32., -0.53\}, \{89., -0.31\}\} \\
& \{3., 32., \{30., -0.79\}, \{31., -0.53\}, \{46., -0.31\}\} \\
& \{2., 33., \{35., -0.46\}, \{39., -0.31\}\} \\
& \{1., 34., \{36., -0.39\}\} \\
& \{4., 36., \{17., -0.38\}, \{34., -0.39\}, \{35., -0.51\}, \{54., -0.33\}\} \\
& \{1., 37., \{38., -1\}\} \\
& \{1., 38., \{37., -1\}\} \\
& \{4., 39., \{10., -0.36\}, \{15., -0.31\}, \{33., -0.31\}, \{41., -0.49\}\} \\
& \{1., 40., \{41., -0.79\}\} \\
& \{2., 41., \{39., -0.49\}, \{40., -0.79\}\} \\
& \{1., 42., \{19., -0.3\}\} \\
& \{3., 43., \{44., -0.43\}, \{45., -0.4\}, \{69., -0.31\}\} \\
& \{3., 44., \{8., -0.35\}, \{43., -0.43\}, \{45., -0.53\}\} \\
& \{3., 45., \{21., -0.32\}, \{43., -0.4\}, \{44., -0.53\}\} \\
& \{3., 46., \{2., -0.31\}, \{32., -0.31\}, \{47., -1\}\} \\
& \{2., 47., \{1., -0.31\}, \{46., -1\}\} \\
& \{2., 48., \{28., -0.31\}, \{50., -0.74\}\} \\
& \{1., 49., \{50., -0.72\}\} \\
& \{2., 50., \{48., -0.74\}, \{49., -0.74\}\}
\end{aligned}$$

FIG. 2 3 A



$\{2., 51., \{53., \underline{-0.62}\}, \{54., \underline{-0.57}\}\}$   
 $\{0., 52.\}$   
 $\{2., 53., \{51., \underline{-0.62}\}, \{94., -38\}\}$   
 $\{4., 54., \{9., -0.3\}, \{36., 0.33\}, \{51., \underline{0.57}\}, \{72., 0.31\}\}$   
 $\{1., 55., \{56., \underline{-1}\}\}$   
 $\{1., 56., \{55., \underline{-1}\}\}$   
 $\{2., 57., \{59., \underline{-0.61}\}, \{91., -0.47\}\}$   
 $\{1., 58., \{59., \underline{-0.79}\}\}$   
 $\{2., 59., \{57., \underline{-0.61}\}, \{58., \underline{-0.79}\}\}$   
 $\{1., 60., \{63., -0.45\}\}$   
 $\{3., 61., \{13., -0.31\}, \{62., -0.3\}, \{63., -0.36\}\}$   
 $\{3., 62., \{12., -0.35\}, \{61., -0.3\}, \{63., \underline{-0.61}\}\}$   
 $\{3., 63., \{60., -0.45\}, \{61., -0.36\}, \{62., \underline{-0.61}\}\}$   
 $\{1., 64., \{65., \underline{-1}\}\}$   
 $\{1., 65., \{64., \underline{-1}\}\}$   
 $\{1., 66., \{68., -0.39\}\}$   
 $\{1., 67., \{68., \underline{-0.97}\}\}$   
 $\{2., 68., \{66., -0.39\}, \{67., \underline{-0.97}\}\}$   
 $\{1., 69., \{43., -0.31\}\}$   
 $\{1., 70., \{72., -0.45\}\}$   
 $\{1., 71., \{72., \underline{-0.63}\}\}$   
 $\{3., 72., \{54., -0.31\}, \{70., -0.45\}, \{71., \underline{-0.63}\}\}$   
 $\{1., 73., \{74., \underline{-1}\}\}$   
 $\{1., 74., \{73., \underline{-1}\}\}$   
 $\{2., 75., \{9., -0.3\}, \{77., \underline{-0.74}\}\}$   
 $\{2., 76., \{28., -0.31\}, \{77., \underline{-0.71}\}\}$   
 $\{3., 77., \{29., -0.3\}, \{75., \underline{-0.74}\}, \{76., \underline{-0.71}\}\}$   
 $\{3., 78., \{80., \underline{-0.65}\}, \{81., -0.6\}, \{99., -0.31\}\}$   
 $\{2., 79., \{80., \underline{-0.5}\}, \{81., -0.44\}\}$   
 $\{4., 80., \{3., -0.34\}, \{15., \underline{-0.31}\}, \{78., \underline{-0.65}\}, \{79., -0.5\}\}$   
 $\{2., 81., \{78., -0.6\}, \{79., -0.44\}\}$   
 $\{3., 82., \{14., -0.32\}, \{16., -0.32\}, \{83., \underline{-1}\}\}$   
 $\{1., 83., \{82., \underline{-1}\}\}$   
 $\{1., 84., \{86., \underline{-0.59}\}\}$   
 $\{1., 85., \{86., \underline{-0.85}\}\}$   
 $\{2., 86., \{84., \underline{-0.59}\}, \{85., \underline{-0.85}\}\}$   
 $\{1., 87., \{1., -0.3\}\}$   
 $\{0., 88.\}$   
 $\{3., 89., \{14., -0.35\}, \{31., -0.31\}, \{90., \underline{-0.92}\}\}$   
 $\{2., 90., \{12., -0.3\}, \{89., \underline{-0.92}\}\}$   
 $\{1., 91., \{57., -0.47\}\}$   
 $\{0., 92.\}$   
 $\{0., 93.\}$   
 $\{2., 94., \{21., -0.3\}, \{53., -0.38\}\}$   
 $\{0., 95.\}$   
 $\{0., 96.\}$   
 $\{1., 97., \{22., -0.32\}\}$   
 $\{1., 98., \{9., -0.42\}\}$   
 $\{1., 99., \{78., -0.31\}\}$   
 $\{0., 1.0 \times 10^2\}$



0075441 002001

DETERMINE RELATIONS 2510



CONSTRUCT GRAPH  
REPRESENTATION 2520



DETERMINE PATHS 2530



DETERMINE GROUP OF RESOURCES 2540  
ON PATHS HAVING MINIMAL RISK

2500

FIG. 25

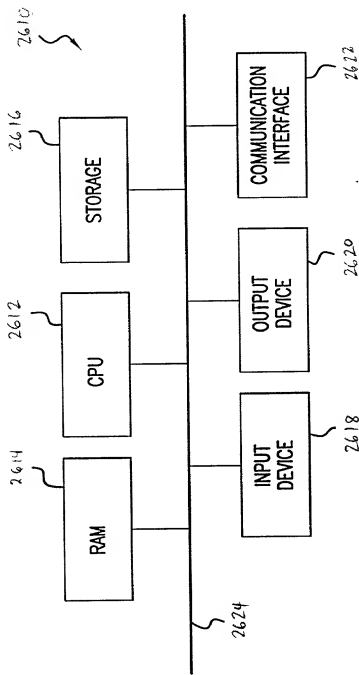


FIG. 26